OIPE IAP25
JUN 0 4 2007
PATENT & TRADEMARK OFFICE

AF
IFW

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/491,991
Filing Date	January 26, 2000
First Named Inventor	Dean Cheng
Art Unit	2157
Examiner Name	Gregory G. Todd
Attorney Docket Number	81862P167

Total Number of Pages in This Submission: 26

ENCLOSURES *(check all that apply)*

- [x] Fee Transmittal Form
  - [x] Fee Attached
- [ ] Amendment / Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
  - [ ] PTO/SB/08
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Basic Filing Fee
  - [ ] Declaration/POA
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s)
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [x] Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) *(please identify below)*:

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Thinh V. Nguyen, Reg. No. 42,034 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	TNguyen
Date	May 30, 2007

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	Tu T. Nguyen		
Signature	Nguyen	Date	5/30/07

Based on PTO/SB/21 (09-04) as modified by Blakely, Sokoloff, Taylor & Zafman (ndc) 10/12/2006.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FEE TRANSMITTAL for FY 2006

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT	($) 500.00

Complete if Known	
Application Number	09/491,991
Filing Date	January 26, 2000
First Named Inventor	Dean Cheng
Examiner Name	Gregory G. Todd
Art Unit	2157
Attorney Docket No.	81862P167

METHOD OF PAYMENT *(check all that apply)*

☒ Check ☐ Credit card ☐ Money Order ☐ None ☐ Other (please identify): ____________

☒ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below

☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☒ Credit any overpayments

FEE CALCULATION

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
Other fee (specify) ____________					
				SUBTOTAL (2) ($)	500.00

SUBMITTED BY Complete (if applicable)

Name *(Print/Type)*	Thinh V. Nguyen	Registration No. *(Attorney/Agent)*	42,034	Telephone	(714) 557-3800
Signature	[signature]			Date	05/30/07

Based on PTO/SB/17 (12-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 12/15/2004.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application. No.	:	09/491,991	Confirmation No. 9322
Applicant	:	Dean Cheng	
Filed	:	January 26, 2000	
TC/A.U.	:	2157	
Examiner	:	Gregory G. Todd	
Docket No.	:	081862.P167	
Customer No.	:	8791	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Applicant submits, the following Appeal Brief pursuant to 37 C.F.R. § 41.37 for consideration by the Board of Patent Appeals and Interferences. Applicant also submits herewith our check number 1156 in the amount of $500 to cover the cost of filing the opening brief as required by 37 C.F.R. § 41.20(1)(b). Please charge any additional fees or credit any overpayment to our deposit Account No.02-2666. A duplicate copy of the Fee Transmittal is enclosed for this purpose.

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest is the assignee, Cisco Technology Incorporation.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the appellants, the appellants' legal representative, or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-68 of the present application are pending and remain rejected. The Applicants hereby appeals the rejection of claims 1-68.

IV. STATUS OF AMENDMENTS

On August 30, 2006, Applicants filed a response to an Office Action dated June 15, 2006. The Examiner issued a Final Office Action on November 15, 2006. On February 28, 2007, Applicants filed a Notice of Appeal and a Pre-Appeal Brief Review Request in response to the Final Office Action. No amendments after the Final Office Action have been filed. On May 7, 2007, the Review panel issued the Notice of Panel Decision stating that the application remains under appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

1. Independent claims 1, 10, 18, 27, 35, 44, and 61:

The claimed invention is a technique to manage congestion in a network. For a receiving node, a congestion status associated with a node in the network is determined. The congestion status is advertised to at least one other node in the network. For a sending node, a congestion status associated with a receiving node in the network is received. The congestion status corresponds to a measured node condition at the receiving node. A call is routed to the receiving node based on the received congestion status. The node may be a logical node which corresponds to a peer group of nodes in a hierarchical network [1].

[1] See Specification, page 4, lines 2-8, 9-11.

A single peer system 100 includes nodes N1 110, N2 120, N3 130, N4 140, N5 150, N6 160, N7 170, N8 180, and customer premises equipment (CPE) 111, 112, 131, 132, 171, 172, 181, 182, and 183. The single peer system 100 represents a network in which nodes are interconnected at the same hierarchical level and form a group[2].

A hierarchical system 200 includes two hierarchical levels 201 and 202. The level 201 includes logical nodes A 210, B 220, and C 230. The level 202 includes nodes 211, 212, 213, 214, 221, 222, 223, 224, 225, 231, 232, and 233. The congestion management for the hierarchical system 200 is essentially similar to that of the peer group of the system 100[3].

A logical node acts on the behalf of its child peer group. Each of the logical nodes A 210, B 220, and C 230 has a congestion manager 105 to manage congestion at the corresponding peer group[4]. The measured conditions are used to indicate a congestion status which indicates whether or not a node has become congested. The broadcasting or advertising of the congestion status can be performed by setting a transit flag in the node. This transit flag is accessible to other nodes[5].

Each of the logical nodes represents its corresponding child peer group and manages the congestion of the peer group. For example, if the traffic condition at the peer group B 220 which includes nodes 221, 222, 223, 224, and 225, becomes congested, the parent logical node B220 advertises the congestion status to other logical nodes by setting its transit flag. The transit flag of each logical node is accessible to other logical nodes[6].

2. <u>Dependent claims 2-9, 11-17, 19-26, 28-34, 36-43, 45-60, and 62-68:</u>

A node may be a transit node or a terminating node. A transit node is one through which a message is routed but is not a final destination. A terminating node is a destination node and is connected to at least one CPE[7].

A process 400 determines a congestion status at the node. This determination can be performed by measuring a node condition. Then, the process 400 determines if the congestion status indicates a congestion at the node. If there is not congestion, the process 400 resets a "transit restricted" flag indicating that the node is not restricted for transit.

---

[2] See Specification, page 4, lines 23-27; page 5, line1; Figure 1, element 100
[3] See Specification, page 6, lines 18-24; Figure 2, elements 201 and 202.
[4] See Specification, page 7, lines 3-5; Figure 2, elements 210, 220, and 230.
[5] See Specification, page 5, lines 17-21.
[6] See Specification, page 7, lines 8-14.
[7] See Specification, page 6, lines 10-13

This transit flag is accessible to other nodes in the network. If there is a congestion, the process 400 sets a "transit-restricted" flag to indicate that all calls through the node should be avoided unless the node is a terminating node[8].

Each of the logical nodes A 210, B 220, and C 230 corresponds to a peer group at the next lower level, i.e., level 202. The logical node A 210 corresponds to a peer group including nodes 211, 212, 213, and 214. The logical node B 220 corresponds to a peer group including nodes 221, 222, 223, 224, and 225. The logical node C 230 corresponds to a peer group including nodes 231, 232, and 233[9].

The single peer system 100 represents a network in which nodes are interconnected at the same hierarchical level and form a group. In one embodiment, the network is an ATM network having an interconnection model of the private network-to-network interface (PNNI)[10].

In one embodiment, the transit flag is one of a topology state parameter in a PNNI system. The topology state parameter is part of a PNNI topology state element (PTSE) which is transmitted in a PNNI topology state packet (PTSP). The PTSE is routing information that is flooded in a peer group. The PTSP contains one PTSE. The topology state parameters include metrics and attributes[11].

A process 500 receives a congestion status associated with a receiving node This congestion status corresponds to a measured node condition at the receiving node. The process 500 determines if the node is a termination node. If the receiving node is a terminating node, the process 500 routes the call to the node If the receiving node is not a terminating node, the process 500 determines if the congestion status indicates that there is a congestion at the node. If there is no congestion, the process 500 route the call to the node. If there is a congestion, the process 500 routes the call to another receiving node[12].

---

[8] See Specification, page 9, lines 21-27; page 10, lines 1-3; Figure 4, blocks 410 – 440.
[9] See Specification, page 6, lines 25-27; page 7, lines 1-3; Figure 2, elements 210, 220, and 230.
[10] See Specification, page 5, lines 1-3; Figure 1, element 100.
[11] See Specification, page 5, lines 21-26.
[12] See Specification, page 10, lines 11-22; Figure 5, blocks 510 - 550.

VI. <u>GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL</u>

A. Claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) are not obvious over Fukuta in view of Proctor.

B. Claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60 under 35 U.S.C. §103(a) are not obvious over Fukuta in view of Proctor, and further in view of Fedyk.

VII. <u>ARGUMENTS</u>

In the Final Office Action, the Examiner rejected claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,090,011 issued to Fukuta et al. ("Fukuta") in view of U.S. Patent No. 6,563,809 issued to Proctor et al. ("Proctor"); and claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor, and further in view of U.S. Patent No. 6,560,654 issued to Fedyk et al ("Fedyk"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a prima facie case of obviousness.

The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." MPEP 2141. In *KSR International Co. vs. Teleflex, Inc.*, (No. 04-1350), in a decision handed on April 30, 2007, the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order <u>to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue</u>." (Slip Op. at 14. *Emphasis added.*) The Court further required that an explicit analysis for this reason must be made. In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

A. Claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) are not obvious over Fukuta in view of Proctor

The Examiner rejected claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor. Applicants respectfully traverse the rejections for the following reasons.

Fukuta discloses a packet congestion control method and packet switching equipment. When a congestion occurs, a congestion indicator is added to a packet destined for the congested output line and the resultant packet is switched to be sent out to the transmission source of the packet (Fukuta, col. 4, lines 55-62). In other words, the congested indicator is simply returned back to source of the packet. It is not advertised or broadcast to other nodes in the network.

Proctor discloses a subscriber-controlled registration technique in a CDMA communication system. The communication system includes a plurality of base stations. The base stations communicate with a plurality of mobile stations (Proctor, col. 2, lines 24-29). The communication protocol includes a congestion indicator signal that identifies whether the base station is operating in a congested state. The congestion indicator field may simply include a flag signal (Proctor, col. 2, lines 59-67). When the base station is operating in a congested state, the flag signal may indicate that the mobile station should not attempt to register with the base station (Proctor, col. 3, lines 1-4).

Fukuta and Proctor, taken alone or in any combination, do not disclose or render obvious, at least one of (1) determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, (2) the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node, and (3) broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level, as recited in claims 1, 18, 35, and 52; or (4) receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, (5) the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node, and (6) routing the call based on the received congestion status, as recited in claims 10, 27, 44, and 61.

Fukuta merely discloses reporting a congestion status at a switch to a transmission source of a packet (Fukuta, col. 5, lines 18-22), not from one node to at least another node. In the Final Office Action, the Examiner contends that "Fukuta teaches broadcasting the congestion status to at least one other node in the network (at least Fig. 1, 13) as Fukuta teaches broadcasting to the transmission node, the transmission node/source being a different node than the node with the congestion." (Final Office Action, page 10, lines 10-13). Applicant respectfully disagrees. Fukuta's system involves a source equipment, a destination equipment, and a switch. A switch is not the same as an equipment. Fukuta does not teach reporting a congestion status at one switch to at least one other switch. Rather, Fukuta teaches reporting a congestion at a switch to a source equipment (Fukuta, col. 5, lines 18-22). A switch and a source equipment are not nodes in a single peer group because they are not of the same type. In contrast, each of the nodes in the claimed invention is a switch that performs switching and routing functions. See, for example, Specification, page 5, lines 4-7.

In addition, Fukuta merely discloses returning a congestion indicator to the transmission source of the packet. Since Fukuta explicitly discloses returning a congestion indicator to the transmission source, Fukuta does not suggest broadcasting to one other node. The following excerpt in Fukuta is included for ease of reference.

> "The congestion indicator is, as will be described in the following paragraphs, added to a header portion to be used only in the switch and is removed when the packet is passed through the transmission interface circuit. In consequence, the transmission packet sent to the destination equipment does not include the congestion indicator." (Emphasis added.)
>
> (Fukuta, col. 5, lines 7-13)

Fukuta, therefore, specifically teaches that the congestion status is **not** to be broadcast to other nodes. In effect, Fukuta teaches away from the present invention. Accordingly, combining Fukuta with any other references is improper. It is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Furthermore, Fukuta does not disclose a node in one of a single peer group and a hierarchical level. Fukuta merely discloses terminals communicating with each other via packet switches (Fukuta, col. 9, lines 11-13). Since these terminals are connected directly at the same level, they cannot correspond to a level in a hierarchical system.

Moreover, Fukuta does not disclose broadcasting. Fukuta merely discloses adding a congestion indicator to a packet destined for a congested output line and operates to switch the resultant packet to be sent out to the transmission source of the packet (Fukuta, col. 4, lines 57-62). Fukuta technique, therefore, operates to report the congestion status ONLY to the transmission source of the packet.

Proctor merely discloses a plurality of base stations broadcasting congestion indicator signals to a mobile station. The mobile station does not broadcast a congestion status signal. It is not configured to do so because it makes its decision to register with a base station based on the loading indicators transmitted globally from the base station (Proctor, col. 2, lines 20-23). Furthermore, the mobile station does not use a transit flag to determine if a call is routed through the node. Proctor merely discloses a flag signal to indicate if a mobile station may register with the base station (Proctor, col. 2, lines 65-67; col. 3, lines 1-4), not to route a call through the node. Moreover, Proctor discloses a wireless or mobile communication system involving mobile and base stations. The mobile communication technology taught by Proctor is totally different than packet switching circuit technology taught by Fukuta. Accordingly, combining Fukuta and Proctor is inappropriate.

Furthermore, Proctor does not disclose or render obvious, at least one of (1) the congestion status corresponding to a measured condition at the node as recited in independent claims 10, 27, 44, and 61, and (2) measuring a node condition at the node as recited in dependent claims 2, 19, 36, and 53. Proctor merely discloses setting a flag signal to indicate if the base station is in a congested state (Proctor, col. 2, lines 60-62). There is no measured condition at the node, including the mobile station. In addition, Proctor does not disclose a node in one of a single peer group and a hierarchical level. Proctor merely discloses a plurality of base stations communicating with a plurality of mobile stations (Proctor, col. 2, lines 23-29; Figure 1). The mobile stations communicate with the base station at the same level, not a hierarchical level.

For the similar reasons, dependent claims 2-9, 11-17, 19-26, 28-34, 36-43, 45-51, 53-60, and 62-68 which depend on independent claims 1, 10, 18, 27, 25, 44, 52, and 61 respectively are distinguishable from the cited prior art references.

In addition, with regard to claims 3, 20, 37, and 54, Fukuta and Proctor, taken alone or in any combination, do not disclose or render obvious, at least one of (1) setting the transit flag if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and (2) resetting the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

As discussed above, Proctor merely discloses a flag signal to indicate if a mobile station may register with the base station (Proctor, col. 2, lines 65-67; col. 3, lines 1-4), not to indicate that a call through the node is avoided unless the node is a terminating node, or to indicate that the node is not restricted for transit.

B. Claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60 under 35 U.S.C. §103(a) are not obvious by Over Fukuta in view of Proctor, and further in view of Fedyk

The Examiner rejected claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor, and further in view of Fedyk. Applicant respectfully traverses the rejections for the following reasons.

Fukuta and Proctor are discussed above.

Fedyk discloses an apparatus and method of maintaining timely topology data within a link state routing network. A link state routing network utilizes broadcast advertisements to notify network devices of bandwidth allocation in the link state network (Fedyk, col. 2, lines 42-43).

Fukuta, Proctor, and Fedyk, taken alone or in any combination, do not disclose or render obvious, at least one of (1) determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, (2) the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node, and (3) broadcasting the congestion status from the node to the at least one other node in the single peer group

or the hierarchical level, as recited in claims 1, 18, 35, and 52; or (4) receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, (5) the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node, (6) routing the call based on the received congestion status, as recited in claims 10, 27, 44, and 61, (7) determining a congestion status associated with a PNNI node, and (8) broadcasting the congestion status to at least one other node using a transit flag being one of a PNNI topology state parameter, as recited by claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68.

As discussed in the above, since neither Fukuta nor Proctor discloses or suggests any of the elements (1) through (7) above, a combination of Fukuta and Proctor with any other reference(s) in rejecting claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 is improper.

Furthermore, Fedyk merely discloses link state routing networks utilizing Private Network Network Interface (PNNI) protocol, but not broadcasting a congestion status to at least one other node in the one of the single peer group and the hierarchical level. Fedyk discloses using broadcast advertisements to notify network devices of bandwidth allocation, not a congestion status. Fedyk does not disclose determining a congestion status. Fedyk merely discloses using a link state advertisement (LSA) to synchronize the source node with other nodes (Fedyk, col. 5, lines 62-67). The LSA is not a congestion status.

The Examiner failed to establish the factual inquires in the three-pronged test as required by the *Graham* factual inquires. There are significant differences between the cited references and the claimed invention as discussed above. Furthermore, the Examiner has not made an explicit analysis on the apparent reason to combine the known elements in the fashion in the claimed invention. Among other things, Fukuta discloses reporting a congestion status at a switch to a source equipment, not a congestion status at a node to one other node; Fukuta discloses returning a congestion indicator to the transmission source, not broadcasting to one other node; Fukuta's terminals communicating with each other via packet switches do not correspond to a level in a hierarchical system; Fukuta's

congestion status is reported to only the transmission equipment, not broadcast to at least one other mode; Proctor's mobile station does not broadcast a congestion status signal; Proctor's flag signal is used to indicate if a mobile station may register with the base station, not to determine if a call is routed through the node; Fedyk's link state routing networks utilizing PNNI protocol do not broadcast a congestion status; and Fedyk's bandwidth allocation is not a congestion status. Accordingly, there is no apparent reason to combine the teachings of Fukuta, Proctor, and Fedyk, in any combination.

Therefore, Applicant submits that independent claims 1, 10, 18, 27, 35, 44, 52, 61 and their respective dependent claims are distinguishable over the cited prior art references.

VIII. CONCLUSION

Applicant respectfully requests that the Board enter a decision overturning the Examiner's rejection of all pending claims, and holding that the claims are neither anticipated or rendered obvious over the cited prior art references.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: May 30, 2007

THINH V. NGUYEN
Reg. No. 42,034

12400 Wilshire Blvd., 7th Floor
Los Angeles, CA 90025-1026
(714) 557-3800

IX. CLAIM APPENDIX

The claims of the present application which are involved in this appeal are as follows:

1. (previously presented) A method to manage congestion in a network, the method comprising:

determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node; and

broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level.

2. (original) The method of claim 1 wherein determining the congestion status comprises:

measuring a node condition at the node, the node condition corresponding to the congestion status.

3. (previously presented) The method of claim 1 wherein determining the congestion status comprises:

setting the transit flag, if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and

resetting the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

4. (previously presented) The method of claim 1 wherein the node is a transit node or a terminating node.

5. (previously presented) The method of claim 1 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

6. (previously presented) The method of claim 1 wherein the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level.

7. (previously presented) The method of claim 1 wherein the network is an asynchronous mode transfer (ATM) network.

8. (previously presented) The method of claim 3 wherein the node is a private network-to-network interface (PNNI) node.

9. (previously presented) The method of claim 8 wherein the transit flag is a PNNI topology state parameter.

10. (previously presented) A method to manage congestion in a network, the method comprising:

receiving a congestion status associated with a node in a single peer group <u>or</u> a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node; and

routing the call based on the received congestion status.

11. (previously presented) The method of claim 10 wherein receiving the congestion status comprises accessing the transit flag set by the node.

12. (previously presented) The method of claim 10 wherein the node is a transit node or a terminating node.

13. (previously presented) The method of claim 10 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

14. (previously presented) The method of claim 10 wherein routing the call comprises:

routing the call to the node if the node is a terminating node;

routing the call to the node if the node is a transit node and the congestion status indicates that the node is not congested; and

routing the call to an other node if the node is a transit node and the congestion status indicates that the node is congested.

15. (previously presented) The method of claim 10 wherein the network is an asynchronous mode transfer (ATM) network.

16. (previously presented) The method of claim 11 wherein the node is a private network-to-network interface (PNNI) node.

17. (previously presented) The method of claim 16 wherein the transit flag is a PNNI topology state parameter.

18. (previously presented) A computer program product comprising:

a computer usable medium having computer program code embodied therein for managing congestion in a network, the computer program product having:

computer readable program code for determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node; and

computer readable program code for broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level.

19. (original) The computer program product of claim 18 wherein the computer readable program code for determining the congestion status comprises:

computer readable program code for measuring a node condition at the node, the node condition corresponding to the congestion status.

20. (previously presented) The computer program product of claim 18 wherein the computer readable program code for determining the congestion status comprises:

computer readable program code for setting the transit flag, if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and

computer readable program code for resetting the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

21. (previously presented) The computer program product of claim 18 wherein the node is a transit node or a terminating node.

22. (previously presented) The computer program product of claim 18 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

23. (previously presented) The computer program product of claim 18 wherein the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level.

24. (previously presented) The computer program product of claim 18 wherein the network is an asynchronous mode transfer (ATM) network.

25. (previously presented) The computer program product of claim 20 wherein the node is a private network-to-network interface (PNNI) node.

26. (previously presented) The computer program product of claim 25 wherein the transit flag is a PNNI topology state parameter.

27. (previously presented) A computer program product comprising:

a computer usable medium having computer program code embodied therein for managing congestion in a network, the computer program product having:

computer readable program code for receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node; and

computer readable program code for routing the call based on the received congestion status.

28. (previously presented) The computer program product of claim 27 wherein the computer readable program code for receiving the congestion status comprises computer readable program code for accessing the transit flag set by the node.

29. (previously presented) The computer program product of claim 27 wherein the node is a transit node or a terminating node.

30. (previously presented) The computer program product of claim 27 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next level.

31. (previously presented) The computer program product of claim 27 wherein the computer readable program code for routing the call comprises:

computer readable program code for routing the call to the node if the node is a terminating node;

computer readable program code for routing the call to the node if the node is a transit node and the congestion status indicates that the node is not congested; and

computer readable program code for routing the call to an other node if the node is a transit node and the congestion status indicates that the node is congested.

32. (previously presented) The computer program product of claim 27 wherein the network is an asynchronous mode transfer (ATM) network.

33. (previously presented) The computer program product of claim 28 wherein the node is a private network-to-network interface (PNNI) node.

34. (previously presented) The computer program product of claim 33 wherein the transit flag is a PNNI topology state parameter.

35. (previously presented) A system interfacing to a network comprising:

a processor coupled to the network; and

a memory coupled to the processor, the memory containing program code for managing congestion in the network, the program code when executed causing the processor to:

determine a congestion status associated with a node in a single peer group <u>or</u> a hierarchical level in the network, the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node; and

broadcast the congestion status from the node to the at least one other node in the single peer group or the hierarchical level.

36. (original) The system of claim 35 wherein the program code causing the processor to determine the congestion status causes the processor to:

measure a node condition at the node, the node condition corresponding to the congestion status.

37. (previously presented) The system of claim 35 wherein the program code causing the processor to determine the congestion status causes the processor to:

set the transit flag, if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and

reset the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

38. (previously presented) The system of claim 35 wherein the node is a transit node and a terminating node.

39. (previously presented) The system of claim 35 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

40. (previously presented) The system of claim 35 wherein the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level.

41. (original) The system of claim 40 wherein the network is an asynchronous mode transfer (ATM) network.

42. (previously presented) The system of claim 41 wherein the node is a private network-to-network interface (PNNI) node.

43. (previously presented) The system of claim 42 wherein the transit flag is a PNNI topology state parameter.

44. (previously presented) A system interfacing to a network comprising:

a processor coupled to the network; and

a memory coupled to the processor, the memory containing program code for managing congestion in the network, the program code when executed causing the processor to:

receive a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the

single peer group or the hierarchical level, the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node; and

route the call based on the received congestion status.

45. (previously presented) The system of claim 44 wherein the program code causing the processor to receive the congestion status causes the processor to access the transit flag set by the node.

46. (previously presented) The system of claim 44 wherein the node is a transit node or a terminating node.

47. (previously presented) The system of claim 44 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

48. (previously presented) The system of claim 44 wherein the program code causing the processor to route the call causes the processor to:

route the call to the node if the node is a terminating node;

route the call to the node if the node is a transit node and the congestion status indicates that the node is not congested; and

route the call to an other node if the node is a transit node and the congestion status indicates that the node is congested.

49. (previously presented) The system of claim 44 wherein the network is an asynchronous mode transfer (ATM) network.

50. (previously presented) The system of claim 45 wherein the node is a private network-to-network interface (PNNI) node.

51. (previously presented) The system of claim 50 wherein the transit flag is a PNNI topology state parameter.

52. (previously presented) An apparatus to manage congestion in a network comprising:

means for determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status being represented by a

transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node; and

means for broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level.

53. (previously presented) The apparatus of claim 52 wherein the means for determining the congestion status comprises:

means for measuring a node condition at the node, the node condition corresponding to the congestion status.

54. (previously presented) The apparatus of claim 52 wherein the means for determining the congestion status comprises:

means for setting the transit flag, if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and

means for resetting the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

55. (previously presented) The apparatus of claim 52 wherein the node is a transit node or a terminating node.

56. (previously presented) The apparatus of claim 52 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

57. (previously presented) The apparatus of claim 52 wherein the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level.

58. (previously presented) The apparatus of claim 52 wherein the network is an asynchronous mode transfer (ATM) network.

59. (previously presented) The apparatus of claim 54 wherein the node is a private network-to-network interface (PNNI) node.

60. (previously presented) The apparatus of claim 59 wherein the transit flag is a PNNI topology state parameter.

61. (previously presented) An apparatus to manage congestion in a network comprising:

means for receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node; and

means for routing the call based on the received congestion status.

62. (previously presented) The apparatus of claim 61 wherein the means for receiving the congestion status comprises:

means for accessing the transit flag set by the node.

63. (previously presented) The apparatus of claim 61 wherein the node is a transit node or a terminating node.

64. (previously presented) The apparatus of claim 61 wherein the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level.

65. (previously presented) The apparatus of claim 61 wherein the means for routing the call comprises:

means for routing the call to the node if the node is a terminating node;

means for routing the call to the node if the node is a transit node and the congestion status indicates that the node is not congested; and

means for routing the call to an other node if the node is a transit node and the congestion status indicates that the node is congested.

66. (previously presented) The apparatus of claim 61 wherein the network is an asynchronous mode transfer (ATM) network.

67. (previously presented) The apparatus of claim 62 wherein the node is a private network-to-network interface (PNNI) node.

68. (previously presented) The apparatus of claim 67 wherein the transit flag is a PNNI topology state parameter.

X. EVIDENCE APPENDIX

None.

XI. RELATED PROCEEDINGS APPENDIX

None.